wherein the antenna array includes a sum input for selecting the individual antennas, so that the ~~antenna mean~~ radiation ~~pattern or~~ directional characteristic exhibits a sum diagram,

wherein the antenna array includes a differential input for selecting the individual antennas so that the ~~antenna mean~~ radiation pattern ~~or directional characteristic~~ exhibits a differential diagram, and

wherein at least one of the phase shifters or hybrid junctions of the network is switchable, so that the ~~antenna mean~~ radiation ~~pattern or~~ directional characteristic exhibits further differential diagrams by the resulting change of the phase behavior due the selection of the individual antennas.

12. (currently amended) An antenna array according to claim 11,

wherein the network, by means in which the individual antennas are connected with each other, is comprised of a 3dB four-grid hybrid junction, two three-grid power dividers (5), a switch (6) for the alternating connection of ~~the~~ inputs and outputs of a first set of said antennas ~~the antenna elements~~ (8) and (9), a second set of antennas ~~the antenna elements~~ (7) through (10), as well as the connecting lines between the components,

wherein the connecting line length between the second set of antennas ~~antenna elements~~ (7) through (10) and the inputs of the three-grid power dividers (5) are equal in length, in order to take into consideration the switch (6), and

wherein the inputs of the four-grid 3dB hybrid junction (4) are connected with the three-grid power divider (5) with and without a $\lambda/4$-detour line.

13. (currently amended) An antenna array according to claim 12, wherein ~~the~~ a double switch (6) is realized by first and second ~~two~~ 3dB hybrid junctions (13) and (14), two switches (15) driven in synchrony, and two circuit segments (16) and (17), wherein the two circuit segments (16) and (17) differ in their length so that the length difference corresponds to an uneven multiple of the half wave length of the waves passing through the array ~~device~~, and wherein the first and second ~~two~~ 3dB hybrid junctions (13) and (14) are switched in series, so that one output from the first hybrid junction (13) is directly coupled with the input from the second hybrid junction (14), while a coupling of the other output from the first hybrid junction (13) and one of the two circuit segments (16) or (17) occurs via the switch (15).

14. (previously amended) An antenna array according to claim 12, wherein the switch (16) is a simple two way switch, with which it is possible to switch between a circuit of length L and a circuit of length $L + \lambda/2$.

15. (previously amended) An antenna array according to claim 14, wherein the switch (6) is a 3dB hybrid junction.

16. (currently amended) An antenna array according to claim 11, wherein for increasing the directional resolution, the antenna array is supplemented with an additional separate

antenna element, and wherein this antenna element is positioned with such a spacing from the antenna array that, in the additive ~~calculated~~ complete diagram of the antenna arrangement, one of the two main lobes is totally or partially suppressed.

17. (currently amended) A process for operating a monopulse ~~an~~ antenna array consisting of individual antennas in order to enhance the directional resolution and angular coverage, ~~in the sense of a monopulse antenna,~~ of which the ~~common antenna mean~~ radiation ~~pattern or~~ directional characteristic is associated with a sum diagram and a differential diagram, the process comprising:

connecting the individual antennas with each other via a network of phase shifters or hybrid junctions, such that the ~~antenna mean~~ radiation ~~pattern or~~ directional characteristic of the antenna array ~~arrays~~ during selection via a sum input produces a sum diagram, and such that the ~~antenna mean~~ radiation ~~pattern or~~ directional characteristic of the antenna array upon selection of a differential input produces a differential diagram, and such that at least one of the phase shifter or hybrid junctions of the network is switchable such that the ~~antenna mean~~ radiation ~~pattern or~~ directional characteristic exhibits further differential diagrams due to the resulting change of the phase behavior upon the selection of the individual antennas.

18. (currently amended) A process according to claim 17, further comprising measuring the phase angle of the output of the differential channel ~~evaluating the phase difference between the differential and the sum channel according to~~

~~the monopulse process~~ for determining the entry direction of a received signal.

19. (currently amended) A process according to claim 17, further comprising, for determining the entry direction of a received signal:

driving the antenna elements non-symmetrically ~~for determining the entry direction of a received signal~~, so that the antenna diagram is deformed, and

comparing the change of the thus received signal at the differential channel with ~~(a)~~ the signal ~~as tapped or~~ received via ~~at~~ the undeformed sum or differential channel ~~or (b) the differential channel with the symmetric antenna diagram~~.

20. (currently amended) A process according to claim 17, comprising

placing a supplemental antenna element with suitable spacing beside the antenna array, so that in the additive diagram of the antenna arrangement one of the two main lobes is completely or partially suppressed, and

comparing the output signal of the device without taking into consideration the supplemental antenna element, with the additive output signal of the total device with the supplemental antenna element, to thereby determine the entry or reception direction of the received signal ~~further comprising making reference to the signal of an antenna element which in the calculated complete diagram of the antenna device completely or partially suppresses one of~~